Amendments to the Specification

In accord with 37 CFR 1.121(b), please amend the Specification by substituting the following amended paragraphs for the same numbered, originally filed paragraphs. References to "conventional" in the description of Fig. 1 have been deleted and the misspelled word "absorbance" has been corrected. No new matter has been added.

[0025] The method and apparatus of this invention will be described initially with particular reference to FIGS. 1 and 2 of the drawings. FIG. 1 shows schematically the elements of a automatic chemical analyzer 10 comprising a sample cup carousel 12 supporting a plurality of open sample tubes 14, a test cuvette carousel 16, adapted to hold a plurality of test cuvettes 18 and to provide plurality of reagent liquid cartridges 20, illustrated as disposed beneath a cut out portion 21 of a lid 22, which covers various thermally controlled compartments. Reagent cartridges 20 may be, for example, a multi-compartment container such as those sold under the tradename FLEX® by Dade Behring Inc., Deerfield, IL. Cuvettes 18 may be formed, as done on the Dimension® chemical analyzer also sold by Dade Behring Inc., Deerfield, IL, by pulling two different composition ribbons of clear film from a cuvette film cartridge, not shown, onto the periphery of the cuvette carousel 16. The cuvette carousel 16, preferably in the form of a wheel, has about a hundred separate cavities for holding cuvette 18, the inner wall of each cavity having an opening to allow transmission of light. A small opening remains at the top of each cuvette 18 to allow the addition of reagent liquid and sample liquid. A sample liquid arm 24 and a wash resource 26 used to clean the probe 28 are located proximate the sample cup carousel 12 and cuvette carousel 16. Sample liquid arm 24 supports a ~~conventional~~ sample liquid probe 28 and is mounted to a rotatable shaft 27 so that movement of sample liquid arm 24 describes an arc intersecting the sample cup carousel 12, cuvettes 18, the wash resource 26 as well as an aliquot deposit port 42, described hereinafter. Sample liquid probe 28 is ~~conventionally~~ adapted, for example by cooperation with a peristaltic pump vacuum source, to withdraw from sample tubes 14 all of or aliquot portions of a patient's specimen to be tested by analyzer 10.

[0026] A first liquid probe 25 is rotatably mounted above cuvette carousel 16 and is adapted to draw reagent liquid from an appropriate reagent liquid cartridge 20 and deposit each reagent liquid within a predetermined cuvette 18 for processing by the chemical analyzer 10. Probe 25 further comprises an ultrasonic mechanism used for aspirating, dispensing and mixing reagents similar to that used in the Dimension® chemical analyzer. Since the hydrating, aspirating, dispensing and mixing mechanisms are well known in the art they need not be described further. Photometic analyzing means, not shown, located beneath the cuvette carousel 16 measures light ~~absorbence~~ absorbance through the cuvettes 18 at various wavelengths, from which the presence of analyte in the sample liquid may be determined using well-known analytical techniques. Thus far, the chemical analyzer ~~is conventional and~~ may be, for example, the Dimension® clinical analyzer sold by Dade Behring Inc., Deerfield, IL, or another similar analyzer commercially available to clinical laboratories.

[0028] Drive means 31 are provided for independently rotating incubation carousel 34 and processing carousel 32 about a common axis, the drive means typically comprising gear teeth disposed on each of the carousels 32 and 34 and interlacing with pinion gears mounted on the shaft of a motor (not shown). ~~The drive means may be of conventional design.~~ The transfer station 38 described above is one of the plurality of processing stations.

[0033] A common transfer station 38, which accesses both carousels 32 and 34, is provided for transferring reaction vessels 36 between the two carousels 32 and 34 and for removing reaction vessels 36 from the sample processing module 30 and passing them into a suitable waste disposal, not shown. The transfer station 38, ~~which may be of conventional design,~~ is used to transfer reaction vessels 36 to/from the processing carousel and to load/unload vessels from the incubation carousel 34. New vessels are routed to the vessel transfer station 38 via a feedtrack 44. Used vessels are routed to the waste container via a chute attached to the underside of the transfer station, beneath a hole in the exit track (not shown).

[0036] The present invention adds to analyzer 10 or similar analyzers available to clinical laboratories a method to automatically and quickly test a second sample aliquot retained in storage for a predetermined period of time in environmentally controlled conditions on analyzer 10. Incoming specimens to be tested are identified by reading with a ~~conventional~~ bar code reader 49 bar coded indicia on sample tubes 14 to determine, among other items, a patient's identity, the tests to be performed, if a sample aliquot is desired to be retained and if so, for what period of time. In addition to a first sample aliquot taken by sample liquid probe 28 from sample tubes 14 containing the specimen to be tested, a second sample aliquot may also taken by sample liquid probe 28 from the specimen and this second sample aliquot is retained by analyzer 10 within an environmentally controlled storage compartment 50.